CLAIMS:

1. An apparatus for modifying a shape of a least a portion of a hair tip, comprising

at least a radiation source generating radiation pulses having wavelengths in a range of about 280 nm to about 100,000 nm and pulse widths in a range of about 1 nsec to about 5 minutes to illuminate a skin treatment area with a fluence in a range of about 0.01 J/cm^2 to about 1000 J/cm^2 so as to modify shapes of at least some hair tips in the treatment area.

2. The apparatus of claim 1, further comprising a mechanism for removing portions of the hair tips protruding above the skin surface.

3. An apparatus for reducing curliness of hair shafts, comprising

one or more radiation sources generating radiation pulses having wavelengths in a range of about 380 nm to about 2700 nm and pulse widths in a range of about 1 nsec to about 1 minute for illuminating a skin treatment area with a fluence in a range of about 0.1 J/cm^2 to about 1000 J/cm^2 so as to reduce curliness of at least some hair shafts in the treatment area.

4. The apparatus of claim 3, further comprising a mechanism for removing portions of the hair tips protruding above the skin surface.

5. An apparatus for controlling hair growth, comprising

at least one radiation source generating electromagnetic radiation having wavelength components in a range of about 1200 to about 1400 nm for application to one or more hair follicles in a skin treatment area so as to modulate hair growth,

wherein said radiation source can be any of an LED, a laser diode, a filtered arc lamp or a filtered halogen lamp.

6. An apparatus for modifying elasticity of hair shafts, comprising

one or more radiation sources generating radiation pulses having wavelengths in a range of about 600 to about 1400 nm and pulse widths in a range of about 1 nsec to about 1

minute for illuminating a skin treatment area with a fluence in a range of about 0.1 J/cm^2 to about 1000 J/cm^2 so as to modify elasticity of at least some hair shafts in the treatment area.

7. A dermatological system, comprising

an applicator having a head portion adapted for scanning over a skin treatment area and incorporating at least one radiation source,

a tracker coupled to said head portion for generating signals indicative of positions of said head portion during a scan, and

a controller coupled to said tracker and said radiation source, said controller periodically activating said radiation source based on position signals received from the tracker.

8. The apparatus of claim 7, wherein said controller determines a distance traversed by said head portion since a previous activation of said radiation source based on said position signals.

9. The apparatus of claim 8, wherein said controller activates the source when said traversed distance exceeds a threshold.

10. A hair treatment method comprising:

applying electromagnetic radiation (EMR) to a skin treatment area to deposit energy in one or more hair tips in the area so as to modify a shape of at least a portion of said hair tips.

11. The method of claim 10, wherein said step of applying radiation comprises exposing at least a portion of said treatment area to a plurality of EMR pulses.

12. The method of claim 10, wherein said applied radiation causes heating of said hair tips so as to reduce sharpness of said tips.

13. The method of claim 10, wherein said applied radiation modifies the shape of said hair tips to a substantially rounded shape.

14. The method of claim 10, wherein said applied radiation modifies the shape of said hair tips so as to inhibit extrafollicular and/or transfollicular penetration of said hair tips.

15. The method of claim 10, wherein said applied radiation causes any of treatment and/or prevention of pseudofolliculitis barbae (PFB) in the treatment area.

16. The method of claim 10, wherein said applied radiation raises temperature of said hair tips to a range of about 50 to about 300 °C.

17. The method of claim 10, further comprising selecting said applied radiation so as to raise temperature of said hair tips to a range of about 50 to about 300 °C while keeping epidermal temperature in the treatment area below about 65 °C.

18. The method of claim 11, wherein said pulses have pulse widths in a range of about 1 ns to about 5 minute.

19. The method of claim 11, wherein said pulses have pulse widths between about 1 microsecond to about 100 milliseconds.

20. The method of claim 19, wherein said pulses have a repetition rate ranging from about 0.1 Hz to about 1 MHz.

21. The method of claim 10, wherein said radiation applies a fluence in a range of about 0.01 J/cm^2 to about 1000 J/cm^2 to said treatment area.

22. The method of claim 10, wherein said applied radiation includes wavelength components in a range of about 280 nm to about 100000 nm.

23. The method of claim 10, wherein said applied radiation includes wavelength components in a range of about 380 nm to about 600 nm.

24. The method of claim 10, wherein said applied radiation includes wavelength components absorbed by at least one of melanin, water, and keratin in said hair tips.

25. The method of claim 10, further comprising drying hair tips in the treatment area prior to said application of the electromagnetic radiation.

26. The method of claim 25, further comprising delivering a flow of air over said treatment area to dry said hair tips.

27. The method of claim 10, further comprising the step of cooling the epidermis in the treatment area.

28. The method of claim 27, wherein said cooling step is performed at any of prior, during or after application of said radiation to the treatment area.

29. The method of claim 10, further comprising applying a topical agent to said skin treatment area, said topical agent being photoactivated chemically or thermally by said radiation to facilitate modifying the shape of the hair tips.

30. The method of claim 29, wherein said topical agent comprises at least one chromophore.

31. The method of claim 30, wherein said topical agent comprises a vehicle for delivering said chromophore to the pilosebaceous canal of hairs in said treatment area.

32. The method of claim 10, wherein said hair tips extend from about 0.2 mm below the skin surface to about 1 mm above the skin surface.

33. The method of claim 10, further comprises removing portions of hair tips protruding above the skin surface prior to applying said radiation.

34. The method of claim 33, wherein said step of removing portions of hair tips is performed substantially simultaneously with applying said electromagnetic radiation.

35. The method of claim 33, wherein the step of removing portions of the hair tips is selected from the group consisting of shaving, clipping, applying a depilatory cream, or applying additional electromagnetic radiation.

36. The method of claim 10, wherein the method further comprises stretching the skin treatment area.

37. The method of claim 10, wherein the method further comprises lifting hairs in the skin treatment area.

38. A method of treating hair, comprising

applying electromagnetic radiation to a skin treatment area for one or more hair shafts in the treatment area so as to cause a change in elasticity of said hair shafts.

39. The method of claim 38, wherein said radiation increases elasticity of said irradiated hair shafts.

40. The method of claim 38, wherein said radiation causes a change in a tensile strength of said hair shafts in a range of about 1 to about 200 MPa of breaking stress.

41. The method of claim 38, wherein said radiation causes substantial straightening of said hair shafts.

42. The method of claim 38, wherein said elasticity change of said hair shafts facilitates any of prevention or treatment of pseudofolliculitis barbae (PFB) in the treatment area.

43. The method of claim 38, wherein said elevated temperature is in a range of about 50 °C to about 300 °C.

44. The method of claim 38, wherein said step of applying electromagnetic radiation comprises applying a plurality of electromagnetic pulses to said treatment area.

45. The method of claim 44, wherein said radiation includes wavelength components in a range of about 380 nm to about 2700 nm.

46. The method of claim 44, wherein said radiation includes wavelength components in a range of about 600 nm to about 1400 nm.

47. The method of claim 44, wherein said pulses have pulse widths in a range of about 1 nsec to about 1 minute.

48. The method of claim 47, wherein said pulses provide a fluence in a range of about 0.1 J/cm^2 to about 1000 J/cm^2.

49. The method of claim 44, further comprising cooling the epidermis in said treatment area.

50. The method of claim 44, further comprising applying a topical agent to said treatment area, said topical agent being capable of photoactivation by said radiation to facilitate softening of the hair shafts.

51. A method of controlling hair growth, comprising

applying electromagnetic radiation having wavelength components in a range of about 1200 to about 1400 nm to one or more hair follicles in a skin treatment area so as to modulate hair growth.

52. The method of claim 51, wherein said applied radiation causes a deceleration of hair growth.

53. The method of claim 51, wherein said applied radiation causes a cessation of hair growth.

54. The method of claim 51, wherein said applied radiation causes a stimulation of hair growth.

55. The method of claim 51, wherein said modulation of hair growth causes any of prevention or treatment of pseudofolliculitis barbae (PFB) in the treatment area.

56. The method of claim 51, further comprising selecting a fluence of said applied radiation to be in a range of about 0.1 J/cm^2 to about 1000 J/cm^2.

57. The method of claim 51, wherein the step of applying radiation comprises exposing the skin treatment area to a plurality of radiation pulses having pulse widths in a range of about 1ns to about 1000s.

58. The method of claim 51, further comprising the step of cooling the epidermis in the treatment area.

59. The method of claim 51, further comprising selecting duration and fluence of said applied radiation so as to cause heating of at least a portion of said hair follicles.

60. A method of treating hair, comprising

irradiating a plurality of hair follicles in a treatment area with radiation of a wavelength, and fluence suitable for decreasing curliness of at least a portion of said hairs.

61. The method of claim 60, wherein said irradiated portion of the hair follicles comprises at least one of the hair bulb, keratogenous zone and bulbar of the hair follicles.

62. The method of claim 60, wherein said radiation causes the hair matrix to effect growth of thinner hair.

63. The method of claim 60, wherein said hair having reduced curliness exhibits a change in a tensile strength in a range of about 1 to about 200 MPa of breaking stress relative to that of a pre-treatment hair.

64. The method of claim 60, wherein said hair having reduced curliness exhibits a reduction in diameter in a range of about 1 to about 60 micrometers relative to that of a pre-treatment hair.

65. The method of claim 60, further comprising selecting said wavelength to be in a range of about 380 nm to about 2700 nm.

66. The method of claim 60, further comprising selecting said wavelength to be in a range of about 600 nm to about 1400 nm.

67. The method of claim 60, further comprising selecting said fluence to be in a range of about 0.1 J/cm^2 to about 1000 J/cm^2.

68. The method of claim 60, wherein said irradiating step comprises applying a plurality of electromagnetic pulses to said treatment area.

69. The method of claim 60, wherein said pulses have pulse widths in a range of about 1 ns to about 10 minute.